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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,991	12/17/1999	MICHAEL B ALLENSON	124-749	1633
23117	7590	04/11/2003		
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714			EXAMINER	
			JACKSON, CORNELIUS H	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/445,991	ALLENSON ET AL. <i>M</i>
	Examiner	Art Unit
	Cornelius H. Jackson	2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 December 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-17 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

Paul *JD*

PAUL IP
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Acknowledgment

1. Acknowledgment is made that applicant's Appeal Brief, filed on 30 December 2002, has been entered. Upon entrance of the Appeal Brief, Applicant's arguments concerning the previous Office action were found to be persuasive and, therefore, the rejection of that action is withdrawn.

Claim Objections

2. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 fails to further limit the subject matter of claim 1, since claim 2 restates the same electrical connection of claim 1, but opens the electrical connection to all the other ways that claim 1 limitation has excluded.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim how "at least two light emitting means *convert* the input current of the electrons into a *single* beam of output radiation".

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim how the input impedance of the light emitting device is substantially equal to the sum of the impedances of the light emitting means when the light emitting means are electrically connected in either parallel or series parallel connection.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al. (WO 96/08857) and Kushibe et al. (4928285). Edwards et al. teach a light emitting device **Fig. 1** comprising at least two light emitting means **TDA** each for converting the input current of electrons into a beam of output radiation, each of the light emitting means **TDA** having an impedance (**characteristic property**) and an individual quantum efficiency (**characteristic property**), wherein the light emitting means **TDA** are electrically connected in series, **see page 3, lines 23-25 and page 4, line 9**, such that the input impedance of the light emitting device is substantially equal to the sum of the impedances of the light emitting means, **see page 5, lines 7-10**, and such that the quantum efficiency of the device is substantially equal to the sum of the quantum efficiencies of the light emitting means, **see page 4, line 17-page 6, line 6**. Edwards et al. fails to teach the light emitting means have a respective optical waveguide and are arranged optically such that the light emitting means do not share a common optical waveguide. Kushibe et al. teach the light emitting means **Fig. 1**, having a respective optical waveguide **18**, are arranged optically such that the light emitting means do not share a common optical waveguide. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the laser of Kushibe et al. in the laser emitting device of Edwards, since Edwards teach the use of a laser that is a single mode laser diode/LED, **see page 13, line 25-page 14, line 2**, and Kushibe et al. teach a single mode laser diode/LED, **see col. 4, lines 3-11**. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis

of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 2, Edwards et al. teach the light emitting means are electrically connected in any one of a parallel connection or in a series parallel connection, **see page 6, lines 7-21.**

Regarding claims 3 and 4, Edwards et al. and Kushibe et al. teach all the stated limitation, since it has been held “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Also see Edwards, page 13, lines 9-16.

Regarding claims 5-7, Kushibe et al. teach all the stated limitations, **see col. 3, lines 40-50 and col. 9, lines 30-42.**

Regarding claim 8, It would have been an obvious matter of design choice to place a reflective coating on an end face of a light emitting means, since applicant has not disclosed that the reflective coating solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the reflectivity of the reflective end faces of the light emitting means.

Regarding claims 9-11, Edwards et al. teach all the state limitations, **see Fig. 1.**

Regarding claims 14-15, the method of how the device operates is not germane to the issue of patentability of the device itself. Therefore, the rejection used against the device, stands for the method as well.

Regarding claims 16-17, Edwards et al. teach all the state limitations, **see Fig. 8 and page 12, lines 18-23.**

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al. (WO 96/08857) and Kushibe et al. (4928285) as applied to claims 1-11 and 14-17 above, and further in view of Rossi et al. (5799029) and/or Hsu (5317440). Edwards et al. and Kushibe et al. teach all the stated limitations except for the use of optical fiber for transmitting the beams of output radiation. Rossi et al. **Figs. 3-4** and Hsu **Figs. 1-2** teach the use of optical fiber for transmitting the beams of output radiation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the optical fiber of Rossi et al. and/or Hsu, since the use of optical fiber is well known in the art and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

10. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



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March 19, 2003